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## Botanical Notes for 1918-1919.

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NOTES ON THE UNUSUAL SEASONAL ACTIVITIES OF CERTAIN PLANTS,  
1918-1919.

Continuing our annual practice begun in the latter part of 1915, we herewith give a list of plants exhibiting unusual seasonal activities—usually that of blooming, and so understood unless otherwise stated. These were observed by the author of the article in or near Emporia, Kan., exceptions being noted. As before, the plants are arranged, where possible, according to Gray's Manual, seventh edition. The list follows:

- Asparagus officinalis* L. On market second time October 25, 1918. Our own were being used by us about October 21; in bloom November 17.
- Ulmus americana* L. In flower (?) January 28, 1919; buds nearly open (flower) February 1, 1919.
- Cerastium brachypodum* (Engelm.) Robinson. November 4; common November 6, 13, 20; abundant December 4, 14, 22; February 1, 1919; February 17.
- Aquilegia canadensis* L. Second time July 25, 1919.
- Alyssum maritimum* Lam. October 26; December 14, 22.
- Lepidium virginicum* L. (?) November 7, 14 (flower and fruit).
- Capsella bursa-pastoris* (L.) Medic. November 6, 13, 14 (flower and fruit); 19 (Katy tracks).
- Brassica nigra* (L.) Koch. (?) November 19 (Katy tracks).
- Spiraea japonica* L. var. *callosa-alba* (?). October 18, 26.
- Spiraea bella* Sims (?). November 6, 14.
- Spiraea trilobata* L. var. *van houttei*. August 13.
- Pyrus communis* L. (Bartlett?). Some flowers frosted; good stamens December 12; good stamens December 14.
- Pyrus malus* L. October 14. Near Wellsville, Kan. Reported by Miss Rita Marley.
- Pyrus japonica* Thunb. November 26 (flowers frosted some).
- Rosa* sp. (A wax rose). November 10, Alma; reported by Miss Ora Fridley.
- Trifolium pratense* L. November 13.
- Trifolium repens* L. November 4, 13, 19 (froze night before).
- Mellilotus officinalis* (L.) Lam. October 26; November 14, 19 (Katy).
- Mellilotus alba* Desr. November 4, 6, 19.
- Medicago sativa* L. November 4, 16.
- Medicago lupulina* L. November 6.
- Linum sulcatum* Walt (?). Yellow flowered, in Stannard pasture, October 17.
- Pelargonium zonale* Willd. November 19 (east of house, and uncovered).
- Acer saccharinum* L. February 4, pistillate flowers out wide, K. S. N. campus. Saw staminate flowers out, but frozen, on Thirteenth street, February 11. Same flowering again February 13; blizzard by evening. Same kind blooming again February 17. Noted bees out.
- Malva rotundifolia* L. November 19 (Katy tracks).
- Viola pedata* L. October 29; November 4.
- Viola cucullata* Ait. October 18, 25; November 4, 6, 10, 19 (Katy); December 19. Reported by Lieutenant Crosswhite.
- Forsythia viridissima* Lindl. December 14, 22.
- Syringa vulgaris* L. September 17, in full bloom at home of Mrs. Ruth V. Winey, seven miles north of Newton, Kan.
- Asclepias* (?) sp. Found a green pod of a member of this family lying in the road on Eighteenth street. This is evidence, of course, that it had bloomed much out of season. November 19, 1919.
- Lycopersicum esculentum* Mill. October 20.
- Solanum rostratum* Dunal. November 12.
- Viburnum opulus sterilis* L. October 26. One "ball" on a bush.
- Solidago* sp. November 19 (Katy tracks).
- Aster* sp. November 19 (Katy tracks).
- Erigeron ramosus* (Walt.) B. S. P. November 7.

*Erigeron canadensis* L. November 14.

*Achillea millefolium* L. November 19 (Katy tracks).

*Taraxacum officinale* Weber. November 14, about full bloom in some places. January 8, 12, snow thawing but a little way from it. January 12 to 16, continuous blooming. January 25, doing well; normally open; bees on one. January 30, fairly numerous flowers. February 17, open well. Seed appeared to be matured in each of the fall and winter months.

*Sonchus asper* (L.) Hill. November 14, 19.

*Solanum tuberosum* Linn. Mr. McNeely brought me a tuber taken from the ground February 27, 1919. It had formed from a potato left in the ground during the winter. It was a "new" potato, with the characteristic thin skin, easily rubbed off. It was about  $\frac{5}{8}$  of an inch in diameter. It was similar to those often formed in cellars. It had probably escaped freezing by a snowdrift covering it during the more severe weather.

*Forsythia viridissima* Lindl. April 2, 1919. The lower part of the bush at our home is full of bloom, to the height of about eighteen inches. The rest of the plant is bare of flowers. We ascribe this to the fact that snow covered it to about this depth during our severe cold weather of the winter. A privet hedge near it caused the drift. This suggests a fact to keep in mind in locating this shrub in our climate. It is beautiful when it blooms, but there are too many springs when it does not bloom freely. We observed another specimen with perhaps half a dozen flowers very close to the ground, and from probably the same cause as ours, only with a shallower snow protection.

#### FURTHER NOTES ON. "POTATO SEED."

In our notes for 1917 we called attention to the question of potato seed and its scarcity. During the past year we noted some fairly well-developed seed balls on some of our potatoes. They were probably Red River Early Ohios. We had a few Irish Cobblers. The balls did not contain any mature seeds. However, we have since noted in seed catalogues potato seed for sale in plenty. In an article in the *Literary Digest* of the present volume is a picture of some potatoes grown from seed. They vary very much in size, color, worth, etc. When these are again planted they will show better what is in them. The possibility is that there may be a potato of some worth appear, and so the experiment has some interest.

#### AN EXPERIMENT WITH CERTAIN TWIGS IN WINTER CONDITION.

The following twigs were collected on or about ——— and placed in water in tumblers or other glass vessels in our laboratory. The water was renewed as it evaporated or seemed in need of renewal for any reason. By April 7 some had sprouted or formed roots. The data has a bearing on the likelihood of some plants to form roots from shoots when kept in water for a time. A list of all of the plants thus tested follows. After this is a list of those that did form roots, with their relative ranking as to the relative abundance of roots formed.

*Pinus austriaca* Hoss.

*Thuja occidentalis* Linn.

*Juniperus virginiana* L.

*Smilax rotundifolia* L.

*Salix fragilis* L.

*Salix amygdaloides* Anders.

*Populus alba* L.

*Populus deltoides* Marsh.

*Juglans nigra* L.

*Carya cordiformis* (Wang.) K. Koch.

*Betula alba* L.

*Quercus macrocarpa* Michx.

*Ulmus fulva* Michx.

*Ulmus americana* L.  
*Celtis occidentalis* L.  
*Maclura pomifera* (Raf.) Schneider.  
*Morus rubra* L.  
*Menispermum canadense* L.  
*Ribes gracile* Michx.  
*Platanus occidentalis* L.  
*Spiræa trilobata* L. var. *vanhouttei*.  
*Spiræa prunifolia* Sieb. & Zucc.  
*Cratægus mollis* (T. & G.) Scheele.  
*Rosa* sp. (Dorothy Perkins rambler).  
*Prunus americana* Marsh.  
*Gymnocladus dioica* (L.) Koch.  
*Gleditsia triacanthos* L.  
*Cercis canadensis* L.  
*Amorpha fruticosa* L.  
*Ailanthus glandulosa* Desf.  
*Rhus glabra* L.  
*Acer saccharinum* L.  
*Acer negundo* L.  
*Vitis cordifolia* Michx. (?).  
*Tilia americana* L.  
*Hibiscus syriacus* L.  
*Cornus asperifolia* Michx.  
*Fraxinus pennsylvanica* Marsh var. *lanceolata* (Borkh.) Sarg.  
*Syringa vulgaris* L.  
*Syringa* sp.  
*Forsythia viridissima* Lindl.  
*Symphoricarpos orbiculatus* Moench.  
*Sambucus canadensis* L.

The following started roots more or less abundantly and readily:

*Sambucus canadensis* L. Slightly.  
*Ulmus fulva* Michx. Slightly.  
*Populus deltoides* Marsh. Slightly.  
*Populus alba* L. Slightly.  
*Hibiscus syriacus* L. Slightly to fairly.  
*Vitis cordifolia* Michx (?). Well.  
*Symphoricarpos orbiculatus* Moench. Well.  
*Salix amygdaloides* Anders. Well.  
*Salix fragilis* L. Very abundantly and readily (best of all).

The above results were noted in the course of a study of twigs in their winter condition by a plant nature-study class.

#### FURTHER NOTES ON POLYCOTYLEDONY IN CERTAIN PLANTS.

At the session of the Academy in 1918 we gave some notes along this line. We can add some slight progress. We have an abundance of seed from a specimen of castor bean plant that showed the above phenomenon. We are expecting to plant some of this seed this spring, and will note results. We also noted three cotyledons in two tomato seedlings this spring, and have them marked and hope to obtain seed from them for further experiment.